

A new species in the genus *Bolivaritettix* Günther (Orthoptera: Tetrigoidea: Metrodoridae) from the Karst area of Guizhou, China

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Abstract: During the investigation of species diversity at the Lengshuihe Nature Preserve in Jinsha, Guizhou, China in Aug. 2015, a new species of the genus *Bolivaritettix*, *B. jinshaensis* Zha & Wen sp. nov. was found. Herein we introduce it with description and illustration. It is similar to but differs from *B. yuanbaoshanensis* Zheng & Jiang by: 1) vertex 1.8 (♂) or 2.0 (♀) times as wide as one eye; 2) in profile, vertex together with frontal ridge protruding and distinctly visible before eyes; 3) midkeel of pronotum interrupted or obscure between lateral keels of prozona; 4) pronotum and hind femur distinctly longer than those of the latter; 5) upper valvulae of ovipositor only 3.8 times as long as wide.

Key words: Metrodorinae; pygmy locust; taxonomy; ecology

贵州喀斯特地区波蚱属一新种记述（直翅目：蚱总科：短翼蚱科）

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摘要: 在对中国贵州金沙县冷水河自然保护区的生物多样性调查过程中, 发现波蚱属 1 新种: 金沙波蚱 *Bolivaritettix jinshaensis* Zha & Wen sp. nov.。该新种近似于元宝山波蚱 *B. yuanbaoshanensis* Zheng & Jiang, 1995, 主要区别: 1) 头顶宽为 1 眼宽的 1.8 倍(♂) 或 2.0 倍(♀); 2) 侧面观头顶和颜面隆起组成在复眼前突出且明显可见; 3) 前胸背板中隆线在沟前区侧隆线之间部分间断或模糊; 4) 前胸背板及后足腿节均明显长于后者; 5) 雌性产卵瓣较后者宽, 长为宽的 3.8 倍。

关键词: 短翼蚱亚科; 蚱; 分类; 生态

Introduction

The genus *Bolivaritettix* (Orthoptera: Tetrigoidea: Metrodoridae) was erected by Günther (1939) who designated *B. sculptus* (Bolívar, 1887) as type species. Currently it includes 93

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accepted species, which are generally distributed across the Oriental Region including Borneo, Burma, China, India, Java, Kampuchea, Thailand, the Philippines including Palawan, the Greater Sunda Islands (Sumatra) and Vietnam. In China there are 73 species reported up to now (Deng *et al.* 2010, 2015; Zha *et al.* 2014, 2015; Zhang *et al.* 2014; Zheng & Yang 2015).

During investigation of species diversity at the Lengshuihe Nature Preserve, Jinsha County, Guizhou Province, China in 3–10 August of 2015, we found a new species of this genus, *Bolivaritettix jinshaensis* Zha & Wen sp. nov. Herein we describe and illustrate it and compare it with similar taxa.

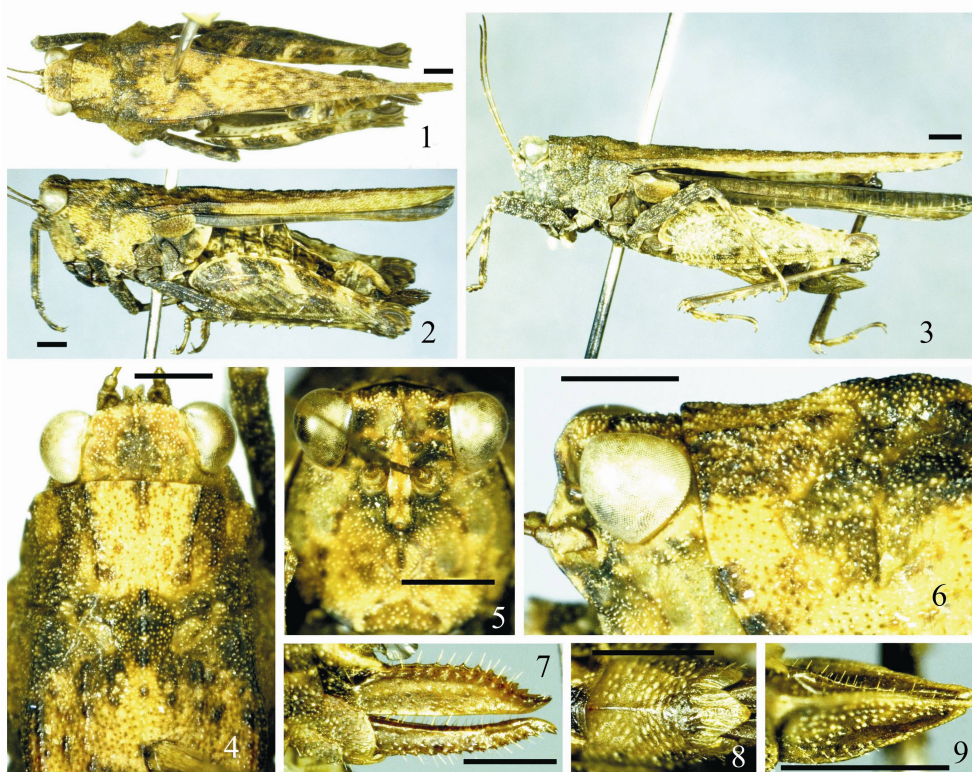
Taxonomy

Bolivaritettix jinshaensis Zha & Wen sp. nov. (Figs. 1–11)

Female. Body stout and size medium. Head very short, not protruding above level of pronotal surface; vertex wide, 2.0 times as wide as one eye, anterior margin straight, protruding but not surpassing beyond level of anterior margins of eyes, anterior part of lateral margin slightly folded upwards; median carina conspicuous and protruding only in anterior half, absent in posterior half; vertex on both sides of median carina distinctly concave; in profile vertex together with frontal ridge roundly angled and protruding which is distinctly visible before eyes; frontal ridge concave between lateral ocelli, arcuately protruding between basal antennae; longitudinal furrow: two margins nearly parallel, dentate between lateral ocelli, slightly narrower than diameter of first segment of antenna. Antenna filiform, 17-segmented, segment IV–VI longest, 7.5 times as long as wide, inserted between lower margins of eyes. Eyes globose, protruding but not above level of pronotal surface; lateral ocellus situated between middle of anterior margin of eye. Pronotal surface coarse, covered with numerous granules and small tubercles; anterior margin of pronotum truncate, midkeel interrupted or obscure between lateral keels of prozona, otherwise complete; in profile upper margin of pronotum with a protrusion before shoulders, otherwise straight, base of the protrusion intumescend and middle slightly depressed; lateral keels of prozona long and complete, constricted backward; humeral angle inconspicuous, and behind it pronotum gradually constricted backward; short longitudinal keels between shoulders obscure but visible, parallel, followed by a pair of shallow concavities on both sides of midkeel; hind process long cone-shaped and its apex truncate, reaching about one-third of hind tibia; hind part of hind process surpasses apex of hind femur 1.7–2.0 mm (variable), pronotum 6.9–7.6 times as long as its hind part; posterior angle of lateral lobe of pronotum extending outwards, apex truncate, posterior margin with two concavities. Visible portion of tegmen short and oval, apex rounded, wings reaching top of hind process of pronotum. Upper and lower margins of fore and mid femora straight, mid femur about equal to tegmen in width. Hind femur 3.3 times as long as wide, upper and lower margin complete; antegenicular denticle acute, genicular denticle short and its apex obtuse. Outer side of hind tibia with 6–8 spines, inner side with 5–6 spines; first and third segments of hind tarsus equal in length, three pulvilli nearly equal in length, apices of all pulvilli obtuse. Ovipositor long, upper valvulae 3.8 times as long as wide, outer margins of upper and lower valvulae with saw-like teeth. Posterior margin of subgenital plate concave and middle widely triangularly protruding; sometimes this protrusion folded inward, which results posterior margin with three teeth from ventral view.

Body brown or dark brown. Antenna brown, hind wings black; fore and mid tibiae with 3 yellowish brown rings respectively, basal and distal rings small while middle ring broad; color of hind femur a little light.

Male. Body a little slender and smaller than female. Vertex 1.8 times as wide as one eye; antenna 16-segmented; mid femur the same as that of female (not narrowing or thinning from basal to distal part); hind part of pronotum surpasses apex of hind femur 2.0–2.5 mm (variable), pronotum 5.5–6.3 times as long as its hind part; wing reaching or slightly surpassing top of hind process; subgenital plate cone-shaped, apex bifurcate and bidentate. Other features same as female.



Figures 1–9. *Bolivaritettix jinshaensis* Zha & Wen sp. nov. 1, 2, 4–8. ♀; 3, 9. ♂. 1. Body, dorsal view; 2, 3. Body, lateral views; 4. Head and anterior pronotum, dorsal view; 5. Frontal view; 6. Head and anterior pronotum, lateral view; 7. Ovipositor, lateral view; 8. Subgenital plate, ventral view; 9. Subgenital plate, lateral view. Scale bars = 1 mm.

Measurements. Length of body ♂10.8–12.0 mm, ♀11.8–14.2 mm; length of pronotum ♂12.7–13.8 mm, ♀13.0–13.8 mm; length of hind femur ♂7.2–7.5 mm, ♀7.8–8.1 mm.

Holotype. ♀, **China**, Guizhou, Jinsha County, Lengshuihe Natural Reserve, 27°54'N, 106°00'E, alt. 650 m, 07-VIII-2015, collected by Lingsheng ZHA. **Paratypes.** 2♂2♀, collected by Yinghong HE & Lingsheng ZHA, other data same as holotype. Type specimens are deposited in the Specimen Room of the School of Life Sciences, Huaibei Normal University, Huaibei, Anhui, China.

Etymology. This new species is named after Jinsha County, its type locality.

Biology and ecology. Specimens were collected between grasses and shrubs beside a stream in the Karst area (Figs. 10, 11). They feed on mosses and other forms of humus. Apart from 5 young adults, 8 nymphs had been collected at the same time and place. We infer the new species overwinter as adults.

Remarks. *Bolivaritettix jinshaensis* Zha & Wen sp. nov. is similar to *B. yuanbaoshanensis* Zheng & Jiang, 1995. The former differs from the latter by: 1) vertex 1.8 (♂) or 2.0 (♀) times as wide as one eye; 2) in profile, vertex together with frontal ridge protruding and distinctly visible before eyes; 3) midkeel of pronotum interrupted or obscure between lateral keels of prozona; 4) pronotum and hind femur distinctly longer than those of the latter; 5) upper valvulae of ovipositor only 3.8 times as long as wide, distinctly wider than that of the latter.

Distribution. China (Guizhou).



Figures 10, 11. Habitat of *Bolivaritettix jinshaensis* Zha & Wen sp. nov., located in Lengshuihe Natural Reserve (27°54'N, 106°00'E, alt. 650 m), Jinsha County, Guizhou, China.

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